Date: 20-03-2020

To,

ASSISTANT EXECUTIVE ENGINEER

SHETTYHALLI SUB DIVISION

BBMP

BANGALORE

Dear Sir,

Sub: M/s. Civil Pro Services for the work of "IMPROVEMENTS TO ROADS AND DRAINS AT KALA ROAD 7TH CROSS AND SURROUNDING AREA ROADS K G HALLI IN WARD NO 12 SHETTYHALLI SUB DIVISION".

Ref: 1. Work Order No: EE/DD/W.O/398/2019-20

2. Job code: 012-19-000016

We are here with forwarding to M/S Technical Manger (West), Karnataka Rural Infrastructure Development Limited, No.280, 59th Cross 17th C Maain Road, 3rd Y Block Rajaji Nagara, Bangalore-560010. First and Final bill duly verified and certified that the Work is satisfactory and for a Gross Value of RS.99,53,308.77 /-(RS. Ninety Nine Lakhs Fifty Three Thousand Three Hundred Eight and Seventy Seven Paisa Only).

Thanking you,

Yours faithfully,

For Civil Pro

R. KARTHIK RECHAN
AUTHORIZED SIGNATORY
CIVIL PRO

CIVIL Pro Sig. Date. BANGALORE

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಬಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಸ್.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು.

QC ABSTRACT

NAME OF WORK: Improvements to Roads and Drains at Kala Road 7th Cross and Surrounding Area Roads K G halli in Ward No 12 Shettyhalli Sub Division

SL NO	Item Of Work	Name of Test	Frequency of Test/Quantity	Executed Quantity	Number of Tests Required	Number of Tests Conducted
		Materials				
1	Cement	Fineness by dry sieving	One Test		1	1
		Finess by Air permeablity method	One Test		1	1
		Density	One Test		1	1
		Standard Consistency	One Test		1	1
		Initial Setting time	One Test		1	1
		Final Setting time	One Test		1	1
		Soundness (Le Chatelier's Method)	One Test		1	1
		Compressive Strength	One Test		1	1
2	Coarse aggregate(40 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
3	Coarse aggregate(20 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
		Aggregate crushing Value	One Test		1	1
		Aggregate Impact Value	One Test		1	1
4	Fine aggregate	SIEVE ANALYSIS	One Test		1	1
		Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
5	Steel	Bend test	One Test		1	1
		Tensile Test	One Test		1	1
		Yield Test	One Test		1	1
		ReBend test	One Test		1	1
6	Precast (100mm)	Core Compressive Strength	One Test		1	1
		Corrected Cylinder Compressive Strength	One Test		1	1
		Equivalent Cube Compressive Strength	One Test		1	1
7	Brick	Compressive Strength	One Test		1	1
		WATER ABSORPTION	One Test		1	1
		EFFLORESCENCE	One Test		1	1
		DIMENSIONS AND TOLERANCES	One Test		1	1
8	RCC(M20)	Compressive Strength(7days and 28days)	7 set /150-200 cum	174.6	14	14

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ಎಸ್.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು.

Format No: CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2020-08-18-33** **Date: 11-02-20**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads and Drains at Kala Road 7th Cross and Surrounding Area Roads K G halli in Ward No 12 Shettyhalli Sub Division
Agency	:	M/S Technical Manger (West), Karnataka Rural Infrastructure Development Limited, No.280, 59th Cross 17th C Maain Road, 3rd Y Block Rajaji Nagara, Bangalore-560010
Customer's Reference	:	EE/DD/W.O/398/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	08-02-20
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 (Part 1,2 3,4,5, 6,11):1988 IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4 IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5 IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6 IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5 IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6
Date of test	:	09-02-20
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	1.79	–
2	Finess by Air permeablity method (m^2/kg,Min)	295.9	225m^2/kg, Min
3	Density (gm/cc)	3.15	–
4	Standard Consistency (%)	28.5%	Not specified
5	Initial Setting time	145 minutes	Not less than 30 minutes
6	Final Setting time	255 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	1.0mm	Not more than 10 mm

Note:

The results pertain to the samples received and tested.

All information furnished by Customer/Representative

Any correction in the report will make this report invalid

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Samples will be disposed after 90 days from the date of issue of test certificate

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FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

Format No: CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2020-08-18-33** **Date: 08-03-20**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads and Drains at Kala Road 7th Cross and Surrounding Area Roads K G halli in Ward No 12 Shettyhalli Sub Division
Agency	:	M/S Technical Manger (West), Karnataka Rural Infrastructure Development Limited, No.280, 59th Cross 17th C Maain Road, 3rd Y Block Rajaji Nagara, Bangalore-560010
Customer's Reference	:	EE/DD/W.O/398/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	08-02-20
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, Determination of Compressive Strength, Clause 6
Date of test	:	09-02-20
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Compressive Strength

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	3 Days	28.5N/mm^2	Not less than 27 N/mm^2
2	7 Days	39.0N/mm^2	Not less than 37 N/mm^2
3	28 Days	58.5N/mm^2	Not less than 53 N/mm^2

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Sig.
Date.
R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

Format No: CP/TF/01

TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2020-08-18-33** **Date: 11-02-20**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads and Drains at Kala Road 7th Cross and Surrounding Area Roads K G halli in Ward No 12 Shettyhalli Sub
Agency	:	M/S Technical Manger (West), Karnataka Rural Infrastructure Development Limited, No.280, 59th Cross 17th C Maain Road, 3rd Y Block Rajaji Nagara, Bangalore-560010
Customer's Reference	:	EE/DD/W.O/398/2019-20
Source of Sample	:	Sample supplied by Agency
Sample condition	:	Satisfactory
Date of Receipt	:	08-02-20
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	08-02-20

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	178	178	1.2	98.8	90-100
3	20 mm	7145	7323	48.8	51.2	30-70
4	10 mm	5699	13022	86.8	13.2	10-35
5	4.75 mm	1705	14727	98.2	1.8	0-5
6	Pan	273	15000	100.0	0	---

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2020-08-18-33** **Date: 11-02-20**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	11.7	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	10.9	
3	Specific Gravity	2.66	–
4	Bulk Density(Loose) (Kg/l)	1.41	–
5	Bulk Density(Compacted) (Kg/l)	1.47	–
6	Water Absorption(%)	0.24	–

Note:

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

Format No: CP/TF/01

TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2020-08-18-33** **Date: 10-02-20**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads and Drains at Kala Road 7th Cross and Surrounding Area Roads K G halli in Ward No 12 Shettyhalli Sub Division
Agency	:	M/S Technical Manger (West), Karnataka Rural Infrastructure Development Limited, No.280, 59th Cross 17th C Maain Road, 3rd Y Block Rajaji Nagara, Bangalore-560010
Customer Reference	:	EE/DD/W.O/398/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	08-02-20
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	08-02-20

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	208	208	4.2	95.8	90-100
3	10 mm	2787	2995	59.9	40.1	25-55
4	4.75 mm	1804	4799	96.0	4.0	0-10
5	Pan	201	5000	100	0	–

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2020-08-18-33** **Date: 10-02-20**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	9.7	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	12.5	
3	Specific Gravity	2.63	–
4	Bulk Density(Loose) (Kg/l)	1.45	–
5	Bulk Density(Compacted) (Kg/l)	1.51	–
6	Water Absorption(%)	0.23	–
7	Aggregate crushing Value(%)	23.8	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	22.7	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

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CIVIL Pro Sig..... Date.....

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signature
Quality Manager

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL |
GEO TECHNICAL | PROJECT MANAGEMENT | SURVEYING SERVICES |

Format No: CP/TF/01

TEST REPORT OF FINE AGGREGATE

Lab ID	:	**CP-2020-08-18-33** **Date: 10-02-20**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads and Drains at Kala Road 7th Cross and Surrounding Area Roads K G halli in Ward No 12 Shettyhalli Sub Division
Agency	:	M/S Technical Manger (West), Karnataka Rural Infrastructure Development Limited, No.280, 59th Cross 17th C Maain Road, 3rd Y Block Rajaji Nagara, Bangalore-560010
Customer's Reference	:	EE/DD/W.O/398/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	08-02-20
Sample Type	:	Fine Aggregate
Reference to BIS codes	:	IS 383 : 2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1, 3) RA2012 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption
Date of test	:	08-02-20
Total weight taken	:	1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	27	27	2.7	97.3	90-100	90-100	90-100	95-100
3	2.36 mm	55	82	8.2	91.8	60-95	75-100	85-100	95-100
4	1.18 mm	239	321	32.1	67.9	30-70	55-90	75-100	90-100
5	600 micron	205	526	52.6	47.4	15-34	35-59	60-79	80-100
6	300 micron	203	729	72.9	27.1	5-20	8-30	12-40	15-50
7	150 micron	191	920	92.0	8.0	0-10	0-10	0-10	0-15
8	Pan	80	1000	100.0	0.0	---	---	---	---

Result :The tested Sample Conforms to Grading Zone II

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CIVIL Pro Sig..... Date..... BANGALORE

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2020-08-18-33** **Date: 10-02-20**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.5	–
2	Specific Gravity	2.59	–
3	Material finer than 75 micron(%)	6.9	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

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